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TO:

Name: Mail Stop APPEAL BRIEF-Patents
Group Art Unit 3738/Examiner Thomas Barrett

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Subject: U.S. Patent Application No. 10/669,287

Gary Karlin Michelson

Filed: September 24, 2003

EXPANDABLE PUSH-IN ARCUATE INTERBODY
SPINAL FUSION IMPLANT WITH TAPERED
CONFIGURATION DURING INSERTION

Attorney Docket No. 101.0092-02000

Customer No. 22882

Confirmation No.: 6591

FROM:

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No. of Pages (including this): 16

Date: April 12, 2007

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Attorney Docket No.: 101.0092-02000
Customer No. 22882

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Gary Karlin Michelson

Serial No: 10/669,287

Filed: September 24, 2003

For: EXPANDABLE PUSH-IN ARCUATE
INTERBODY SPINAL FUSION
IMPLANT WITH TAPERED
CONFIGURATION DURING
INSERTION

Confirmation No.: 6591

Art Unit: 3738

Examiner: Thomas Barrett

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:


Further to the Notice of Appeal dated December 18, 2006 and in reply to the Notice of Panel Decision from Pre-Appeal Brief Review dated January 22, 2007, transmitted herewith is an Appeal Brief in the above-identified application.

- ☐ No additional fee is required.
- ☒ Applicant hereby requests a two-month extension of time to respond to the above office action.
- ☒ The total amount of \$950.00 to cover the \$450 two-month extension fee and \$500 Appeal Brief fee is to be charged to Deposit Account No. 50-3726.
- ☒ The Commissioner is hereby authorized to charge any deficiencies of fees associated with this communication or credit any overpayment to Deposit Account No. 50-3726. A copy of this sheet is enclosed.
- ☒ Any filing fees under 37 C.F.R. § 1.16 for the presentation of extra claims
- ☒ Any patent application processing fees under 37 C.F.R. § 1.17

Respectfully submitted,

MARTIN & FERRARO, LLP

Date: April 12, 2007

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PATENT
 Attorney Docket No. 101.0092-02000
 Customer No. 22882

APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:) Confirmation No.: 6591
 Gary Karlin Michelson)
 Serial No.: 10/669,287) Group Art Unit: 3738
 Filed: September 24, 2003) Examiner: Thomas Barrett
 For: EXPANDABLE PUSH-IN ARCUATE)
 INTERBODY SPINAL FUSION)
 IMPLANT WITH TAPERED)
 CONFIGURATION DURING)
 INSERTION)

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 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

APPEAL BRIEF

Real Party in Interest

The real party in interest is Warsaw Orthopedic, Inc. ("Appellant"), the assignee of record, which is a subsidiary of Medtronic, Inc.

Related Appeals and Interferences

There are no appeals or interferences pending which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-96 are pending.

Claims 1-96 have been rejected and are being appealed.

Status of Amendments

Appellant amended claim 1 in an Amendment After Final dated December 8, 2006 to recite an implant with upper and lower members having arcuate portions, "said

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Appeal Brief 4-12-07.doc

Application No. 10/669,287
Appeal Brief dated April 12, 2007

arcuate portions of said upper and lower members in the first position being angled to one another over a majority of the longitudinal length of said implant." The Examiner did not enter the amendment to claim 1, because, according to the Examiner, "the new limitation 'longitudinal' requires further search and consideration."

Summary of Claimed Subject Matter

Independent claim 1

The present invention in one preferred embodiment is directed to a push-in interbody spinal fusion implant for at least in part linear insertion across the surgically corrected height of a disc space between two adjacent vertebral bodies of a spine, the implant comprising:

an upper member (102) having a portion being at least in part arcuate (104) adapted for placement toward and at least in part within one of the adjacent vertebral bodies (V), the upper member (102) having at least one opening (110) adapted to communicate with one of the adjacent vertebral bodies (V), the upper member (102) having a proximal end and a distal end (See Specification, page 15, line 20, to page 16, line 1, and Figs. 1, 2, 4, 6, 10, 11, and 12C).

a lower member (106) having a portion being at least in part arcuate (108) adapted for placement toward and at least in part within the other of the adjacent vertebral bodies (V), the lower member (106) having at least one opening (112) adapted to communicate with the other of the adjacent vertebral bodies (V), the openings (110, 112) of the upper and lower members (102, 106) being in communication with one another and adapted for permitting for the growth of bone from adjacent vertebral body (V) to adjacent vertebral body (V) through the implant and being sufficiently sized and located to allow for interbody spinal fusion through the implant, the lower member (106) having a proximal end and a distal end corresponding to the proximal end and the distal end of the upper member (102), respectively, and a length between the proximal and distal ends (See Specification, page 15, line 20, to page 16, line 1, and Figs. 1, 4, 6, 10, 11, and 12C), the upper and lower members (102,

Application No. 10/669,287
Appeal Brief dated April 12, 2007

106) articulating therebetween adjacent one of the proximal ends and the distal ends of the upper and lower members (102, 106) and allowing for expansion of the height of the implant (See Specification, page 16, lines 1-4, and Fig. 1), the upper and lower members (102, 106) having a first position relative to one another allowing for a collapsed implant height during insertion of the implant into the spine and a second position relative to one another allowing for an increased height (See Specification, page 16, lines 4-7, and Figs. 10, 12A, 12B, and 12C), the arcuate portions (104, 108) of the upper and lower members (102, 106) in the first position being angled to one another over a majority of the length of the implant (See Specification, page 5, lines 25-30, and Figs. 4, 6, 11, and 12A) and forming at least a portion of one of a frusto-conical shape (See Specification, page 16, lines 13-15) and the shape of a cylinder split along a horizontal plane through its mid-longitudinal axis (See Specification, page 16, lines 16-18) with the upper member and the lower member being angled to each other along the length of the implant (See Figs. 4, 6, 11, and 12A);

at least a portion of a bone-engaging projection (118) is adapted for linear insertion formed on the exterior of each of the opposed arcuate portions (104, 108) of the upper and lower members (102, 106) for penetrably engaging the adjacent vertebral bodies (V) and to facilitate securing the implant into the spine (See Specification, page 16, lines 9-12, and Figs. 11 and 12A); and

at least one blocker (121) adapted to cooperatively engage and hold at least a portion of the upper and lower members (104, 108) apart so as to maintain the increased height of the implant and resist the collapse of the implant to the collapsed implant height when the implant is in a final deployed position (See Specification, page 16, lines 21-27, and Figs. 12B and 12C).

Grounds of Rejection to be Reviewed on Appeal

1. Whether claims 1-96 are unpatentable under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, whether the specification as originally filed would reasonably convey to one skilled in the relevant art

Application No. 10/669,287
Appeal Brief dated April 12, 2007

that the inventor was in possession of an implant with upper and lower members having arcuate portions that in a first position having a collapsed implant height are angled to one another over "a majority" of the length of the implant.

II. Whether claims 1-72, 74-76, and 84-87 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,117,174 to Nolan ("Nolan") in view of U.S. Patent No. 5,785,710 to Michelson ("Michelson '710"). In particular, whether Nolan, Michelson '710, or the combination thereof teach or suggest an implant with upper and lower members having arcuate portions that in a first position having a collapsed implant height are angled to one another over a majority of the length of the implant.

Argument

The Appellant submits the following arguments for consideration by the Board of Patent Appeals and Interferences:

I. The specification as filed illustrates the inventor was in possession of an implant with upper and lower members having arcuate portions that in a first position having a collapsed implant height are angled to one another over "a majority" of the length of the implant.

The test to determine if a claim or claims satisfy the written description requirement of 35 U.S.C § 112, first paragraph, with respect to latter-filed claims is whether the disclosure relied upon reasonably conveys to a person skilled in the relevant art that the inventor had possession of the claimed subject matter at the time of filing. (*See, e.g., Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319, 66 USPQ.2d 1429, 1438 (Fed. Cir. 2003)). The specification indicates that the arcuate portions of the upper and lower members in a first position having a collapsed implant height can be "angled to one another over a substantial portion of the length of the implant". (Specification, page 5, lines 25-30). Applicant submits that a majority is a substantial portion of the length of the implant. Therefore, contrary to the Examiner's rejection of claims 1-96 under 35 U.S.C. § 112, first paragraph, the specification provides support for at least one embodiment of the push-in interbody spinal fusion

Application No. 10/669,287
Appeal Brief dated April 12, 2007

implant of the present invention having an upper member having a portion being at least in part arcuate and a lower member having a portion being at least in part arcuate with "said arcuate portions of said upper and lower members in the first position being angled to one another over a majority of the length of said implant" as recited in independent claim 1.

II. The present invention is not obvious under 35 U.S.C. § 103(a) in light of Nolan, Michelson '710, or a proper combination thereof.

Nolan teaches an implant (10) that, in an unexpanded position during insertion, "has a substantially cylindrical profile, which means a cylindrical profile except for the flats 35." (Nolan, column 6, lines 3-6). As such, in the unexpanded position during insertion, the surfaces of implant (10) are parallel to each other along a majority of the length of the implant. (See Nolan, Fig. 11).

In detailing the limitations of previous implants, Nolan teaches that frusto-conical shaped implants may be undesirable. According to Nolan, "although in theory these implants may restore the curvature of the spine, they are difficult to install since special reamers may be needed to provide a tapered hole or a cylindrical hole must be modified by the implant which could put undue stress on the adjacent vertebrae." (Nolan, column 1, lines 38-42). Moreover, Nolan indicates "the present invention... is easier to install than tapered implants." (Nolan, column 7, lines 39-41).

The Examiner argues that "Nolan discloses an expansile spinal fusion implant with a portion of a frusto-conical shape and an expanding disc (Fig. 17)." According to the Examiner, the implant (10) of Nolan "can be cylindrical or frusto-conical in its unexpanded position." As such, the Examiner relies on one sentence and Fig. 17 of Nolan to support the rejection. Fig. 17 illustrates the implant (10) when installed, and, therefore, does not support arguments relating to the implant (10) in an unexpanded position during insertion. Furthermore, the sentence that the Examiner relies upon indicates that the width of the implant (10) at its extreme ends may or may not be equal. (See Nolan, column 4, lines 21-23). However, indicating the width of the implant (10)

Application No. 10/669,287
Appeal Brief dated April 12, 2007

at its extreme ends may or may not be equal, does not support a conclusion that the implant (10) includes portions that would be angled over the majority of its length during insertion. Moreover, such a reading would be contrary to the above-discussed teachings of Nolan. Consequently, Applicant submits that neither Nolan nor Michelson '710, whether alone or in proper combination, teach or suggest an Implant with upper and lower members having arcuate portions that in a first position having a collapsed implant height are angled to one another over a majority of the length of the implant as recited in independent claim 1.

Applicant submits that the rejection of claims 1-72, 74-76, and 84-87 under 35 U.S.C. § 103(a) as being unpatentable over Nolan in view of Michelson '710 has been overcome.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to Deposit Account No. 50-3726.

Respectfully submitted,

MARTIN & FERRARO, LLP

Dated: April 12, 2007

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Claims Appendix I

1. A push-in interbody spinal fusion implant for at least in part linear insertion across the surgically corrected height of a disc space between two adjacent vertebral bodies of a spine, said implant comprising:

an upper member having a portion being at least in part arcuate adapted for placement toward and at least in part within one of the adjacent vertebral bodies, said upper member having at least one opening adapted to communicate with one of the adjacent vertebral bodies, said upper member having a proximal end and a distal end;

a lower member having a portion being at least in part arcuate adapted for placement toward and at least in part within the other of the adjacent vertebral bodies, said lower member having at least one opening adapted to communicate with the other of the adjacent vertebral bodies, said openings of said upper and lower members being in communication with one another and adapted for permitting for the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant and being sufficiently sized and located to allow for interbody spinal fusion through said implant, said lower member having a proximal end and a distal end corresponding to said proximal end and said distal end of said upper member, respectively, and a length between said proximal and distal ends, said upper and lower members articulating therebetween adjacent one of said proximal ends and said distal ends of said upper and lower members and allowing for expansion of the height of said implant, said upper and lower members having a first position relative to one another allowing for a collapsed implant height during insertion of said implant into the spine and a second position relative to one another allowing for an increased height, said arcuate portions of said upper and lower members in the first position being angled to one another over a majority of the length of said implant and forming at least a portion of one of a frusto-conical shape and the

Application No. 10/669,287
Appeal Brief dated April 12, 2007

shape of a cylinder split along a horizontal plane through its mid-longitudinal axis with said upper member and said lower member being angled to each other along the length of said implant;

at least a portion of a bone-engaging projection is adapted for linear insertion formed on the exterior of each of said opposed arcuate portions of said upper and lower members for penetrably engaging the adjacent vertebral bodies and to facilitate securing said implant into the spine; and

at least one blocker adapted to cooperatively engage and hold at least a portion of said upper and lower members apart so as to maintain the increased height of said implant and resist the collapse of said implant to the collapsed implant height when said implant is in a final deployed position.

2. The push-in implant of claim 1, further comprising a hollow defined between said upper and lower members in communication with said openings in each of said upper and lower members, said hollow being adapted to receive fusion-promoting substances.
3. The push-in implant of claim 2, wherein said hollow has a width that is unobstructed by any mechanism for moving said blocker.
4. The push-in implant of claim 2, further comprising a second hollow between said upper and lower members located between said blocker and said end of said implant proximate said blocker.
5. The push-in implant of claim 3, wherein said implant has a constant width in both the collapsed height and the increased height.
6. The push-in implant of claim 3, wherein said blocker is located at least in part between said upper and lower members.
7. The push-in implant of claim 3, wherein said blocker is located proximate at least one of said ends of said upper and lower members.
8. The push-in implant of claim 3, wherein said blocker is adapted to cooperatively engage a tool used to move said blocker from an initial position to a final position to increase the height of said implant, said tool not being a part of said implant

Application No. 10/869,287
Appeal Brief dated April 12, 2007

and being removed from said implant after moving said blocker into the final position.

9. The push-in implant of claim 3, wherein said implant has a width and said blocker has a width less than the width of said implant.
10. The push-in implant of claim 3, wherein each of said upper and lower members are adapted to cooperate with and to fixedly locate said blocker.
11. The push-in implant of claim 10, wherein each of said upper and lower members have a track configured to permit said blocker to seat therein.
12. The push-in implant of claim 11, wherein at least one of said tracks and said blocker are adapted to cooperate with each other to center said blocker along a longitudinal axis of said implant.
13. The push-in implant of claim 3, wherein said blocker moves said arcuate portions of said upper and lower members from a first angled orientation to a second angled orientation relative to one another.
14. The push-in implant of claim 3, further comprising a second blocker located between said upper and lower members for holding at least a portion of the upper and lower members apart where said second blocker is located.
15. The push-in implant of claim 3, wherein said blocker is an expander adapted to expand said implant from a first collapsed height to a second expanded height when moved from a first to a second position.
16. The push-in implant of claim 15, wherein said expander is located proximate said proximal ends of said upper and lower members.
17. The push-in implant of claim 15, wherein said expander is located proximate said distal ends of said upper and lower members.
18. The push-in implant of claim 15, wherein said hollow is substantially unobstructed by said expander extending along a substantial portion of the length of said hollow so as to permit growth of bone from adjacent vertebral body to adjacent vertebral body through said implant.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

19. The push-in implant of claim 15, wherein said expander is adapted to cooperatively engage a tool used to move said expander from an initial position to a final position to increase the height of said implant, said tool not being a part of said implant and being removed from said implant after moving said expander into the final position.
20. The push-in implant of claim 15, wherein said expander is adapted to cooperatively engage a tool that rotates about an axis parallel to the longitudinal axis of said implant to rotate said expander to increase the height of said implant.
21. The push-in implant of claim 20, wherein said expander rotates in a plane perpendicular to the longitudinal axis of said implant to increase the height of said implant.
22. The push-in implant of claim 21, wherein said expander remains in the same location along the longitudinal axis of the implant when rotated.
23. The push-in implant of claim 15, wherein said expander moves said arcuate portions of said upper and lower members from a first angled orientation to a second angled orientation relative to one another.
24. The push-in implant of claim 15, wherein each of said upper and lower members are adapted to cooperate with said expander.
25. The push-in implant of claim 24, wherein each of said upper and lower members have a track configured to permit said expander to rotate therein.
26. The push-in implant of claim 25, wherein said track of said upper member and said track of said lower member are in the same plane.
27. The push-in implant of claim 25, wherein said track of said upper member and said track of said lower member are parallel to one another.
28. The push-in implant of claim 25, where said track of said upper member and said track of said lower member are in a plane perpendicular to the longitudinal axis of said implant.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

29. The push-in implant of claim 15, wherein said upper and lower members structurally cooperate with said expander so as to keep said expander located within said implant.
30. The push-in implant of claim 25, wherein at least one of said tracks of said upper and lower members has a cooperating surface, said expander having a corresponding cooperating surface that contacts said cooperating surface of said at least one track to orient said expander in a predetermined location.
31. The push-in implant of claim 30, wherein said cooperating surfaces orient said expander within said implant such that the axis of rotation of said expander is parallel with the longitudinal axis of said implant.
32. The push-in implant of claim 31, wherein said cooperating surfaces center said expander within said implant such that the axis of rotation of said expander coincides with the longitudinal axis of said implant.
33. The push-in implant of claim 3, wherein said upper and lower members are configured to cooperate with one another so as to stop said upper and lower members from being moved apart from one another more than a predetermined distance.
34. The push-in implant of claim 24, wherein said upper and lower members are adapted to cooperate with said expander so as to center said expander within a cross section of the upper and lower members.
35. The push-in implant of claim 25, wherein at least one of said tracks of said upper and lower members includes at least one side having a cooperating surface, said expander having a corresponding cooperating surface that contacts said cooperating surface of said at least one side to orient said expander in a predetermined location.
36. The push-in implant of claim 35, wherein said cooperating surface of said at least one side is a detent and said corresponding cooperating surface of said expander is a projection.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

37. The push-in implant of claim 36, wherein said detent and said projection center said expander within said implant such that the axis of rotation of said expander coincides with the longitudinal axis of said implant.
38. The push-in implant of claim 15, wherein said expander has a first height corresponding to the height of said expander when said implant is initially inserted into the spine, said expander having a second height corresponding to the height of said expander when said expander is moved into a final deployed position to increase the height of said implant, said second height being greater than said first height.
39. The push-in implant of claim 15, wherein said expander has a depth dimension less than that of said first and second height of said expander.
40. The push-in implant of claim 39, wherein said expander has a fixed shape during movement from an initial insertion position to a final deployed position within said implant.
41. The push-in implant of claim 15, further comprising a second expander located between said upper and lower members for moving at least a portion of the upper and lower members away from one another to increase the maximum height of said implant where said second expander is located.
42. The push-in implant of claim 41, wherein said second expander rotates to increase the height of said implant.
43. The push-in implant of claim 41, wherein said second expander is located proximate an end of said implant opposite said expander.
44. The push-in implant of claim 41, wherein said implant has a longitudinal axis and said second expander rotates in a plane perpendicular to the longitudinal axis of said implant to increase the height of said implant.
45. The push-in implant of claim 43, wherein said hollow is substantially unobstructed by said second expander extending along a substantial portion of the length of said hollow so as to permit growth of bone from adjacent vertebral body to adjacent vertebral body through said implant.

Application No. 10/689,287
Appeal Brief dated April 12, 2007

46. The push-in implant of claim 43, wherein said second expander remains in the same location along the longitudinal axis of the implant when rotated.
47. The push-in implant of claim 41, wherein said second expander is located proximate one of the proximal end and the distal end of said upper and lower members.
48. The push-in implant of claim 47, wherein said hollow is unobstructed by said second expander extending along a substantial portion of the length of said hollow to permit growth of bone from adjacent vertebral body to adjacent vertebral body through said implant.
49. The push-in implant of claim 47, further comprising a second hollow between said upper and lower member located between said second expander and said end of said implant proximate said second expander.
50. The push-in implant of claim 41, wherein each of said upper and lower members have a track within which said second expander rotates.
51. The push-in implant of claim 50, wherein said track is configured to permit said second expander to rotate therein and then to move from side to side within said track.
52. The push-in implant of claim 41, wherein said second expander has a first height corresponding to the height of said second expander when said implant is initially inserted into the spine, said second expander having a second height corresponding to the height of said second expander when said second expander is moved into a final deployed position to increase the height of said implant, said second height being greater than said first height.
53. The push-in implant of claim 41, wherein said second expander has an upper surface, a lower surface, and side surfaces as defined when said second expander is positioned to increase the height of said implant, and said side surfaces intersecting said upper and said lower surfaces at two diametrically opposed junctions.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

54. The push-in implant of claim 53, wherein the difference between said first height and said second height of said second expander approximates the difference in height of said implant between said first position and said second position as measured proximate the location of said second expander.
55. The push-in implant of claim 3, wherein said upper and lower members have walls contacting one another.
56. The push-in implant of claim 54, wherein said walls are aligned parallel with the longitudinal axis of said implant.
57. The push-in implant of claim 54, wherein said walls are at least in part overlapping.
58. The push-in implant of claim 3, wherein said upper and lower members have a rotational articulation therebetween adjacent one of said proximal end and said distal end of said upper and lower members.
59. The push-in implant of claim 58, wherein said rotational articulation is at one of said proximal end and said distal end of said upper and lower members opposite said blocker.
60. The push-in implant of claim 58, wherein said rotational articulation allows for expansion.
61. The push-in implant of claim 60, wherein said rotational articulation allows for limited expansion.
62. The push-in implant of claim 3, wherein one of said upper and lower members has an interior wall, which is unexposed, extending therefrom toward the other of said upper and lower members when said implant is in an initial insertion position, and when said implant is in a final position said implant has a shape such that each of said arcuate portions of said upper and lower members are separated by at least a portion of said interior wall, which now has an exposed side.
63. The push-in implant of claim 62, wherein said upper and lower members have side walls for engaging each other.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

64. The push-in implant of claim 63, wherein said side walls of said upper and lower members are at least partially overlapping walls.
65. The push-in implant of claim 62, wherein said arcuate portions of said upper and lower members form an angular orientation relative to one another when said implant is in the final position.
66. The push-in implant of claim 62, wherein said arcuate portions of said upper and lower members when said implant is in the final position form one of a frusto-conical shape and the shape of a cylinder split along a horizontal plane through its mid-longitudinal axis with said upper member and said lower member being angled to each other.
67. The push-in implant of claim 3, wherein said implant has an interior, at least one of said upper and lower members has a screw hole passing therethrough adapted to receive a screw passing from said interior of said implant into one of the adjacent vertebral bodies.
68. The push-in implant of claim 67, wherein each of said upper and lower members has at least one screw hole passing therethrough adapted to receive a screw passing from said interior of said implant into the adjacent vertebral body in contact with each of said upper and lower members respectively.
69. The push-in implant of claim 67, further comprising at least one screw adapted to pass from said interior of said implant through said screw hole and into the adjacent vertebral body to anchor said implant to the adjacent vertebral body.
70. The push-in implant of claim 3, wherein said implant has a side surface when in a final position that is contoured to cooperate with another implant.
71. The push-in implant of claim 70, wherein said implant and said cooperating other implant have a combined width therebetween less than the combined height of said implant and said cooperating other implant.
72. The push-in implant of claim 3, further comprising a cap for closing one of said proximal end and said distal end of said upper and lower members, said cap having an exterior surface and an interior surface.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

73. The push-in implant of claim 72, wherein said interior surface of said cap has spaced slots about its circumference to facilitate a snap fit of said cap into said implant.
74. The push-in implant of claim 3, wherein said implant comprises an artificial material other than bone.
75. The push-in implant of claim 3, wherein said implant is made of an artificial material that is stronger than bone.
76. The push-in implant of claim 3, wherein said implant is made of an artificial material that is harder than bone.
77. The push-in implant of claim 3, wherein said implant comprises bone.
78. The push-in implant of claim 77, wherein said bone includes cortical bone.
79. The push-in implant of claim 3, wherein said implant comprises bone growth promoting material.
80. The push-in implant of claim 79, wherein said bone growth promoting material is selected from the group consisting of bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.
81. The push-in implant of claim 3, wherein said implant is treated with a bone growth promoting substance.
82. The push-in implant of claim 3, wherein said implant is a source of osteogenesis.
83. The push-in implant of claim 3, wherein said implant is at least in part bioabsorbable.
84. The push-in implant of claim 3, wherein said implant comprises metal.
85. The push-in implant of claim 84, wherein said metal is ASTM material suitable for use in said push-in spinal fusion implant.
86. The push-in implant of claim 84, wherein said metal includes titanium.
87. The push-in implant of claim 3, wherein said implant comprises a plastic material.
88. The push-in implant of claim 3, wherein said implant comprises a ceramic material.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

89. The push-in implant of claim 3, wherein said implant is formed of a porous material.
90. The push-in implant of claim 3, wherein said implant is formed of a material that intrinsically participates in the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant.
91. The push-in implant of claim 3, wherein at least a portion of said implant is treated to promote bone ingrowth between said implant and said adjacent vertebral bodies.
92. The push-in implant of claim 3, in combination with a chemical substance to inhibit scar formation.
93. The push-in implant of claim 3, wherein said blocker is an expander having an external thread, each of said upper and lower members having a threaded converging portion adapted to cooperate with said external thread of said expander to expand said implant from a first collapsed height to a second expanded height when said expander is rotated from a first to a second position.
94. The push-in implant of claim 79, wherein said bone growth promoting material includes at least one of bone, bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.
95. The push-in implant of claim 1, further in combination with a bone growth promoting material.
96. The push-in implant of claim 95, wherein said bone growth promoting material includes at least one of bone, bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

Evidence Appendix

There is no evidence submitted herewith.

Application No. 10/669,287
Appeal Brief dated April 12, 2007

Related Proceedings Appendix

There are no related proceedings relevant to this appendix.